CLAIMS

What is claimed is:

1. A mold valve assembly for a molding system comprising:

a mold valve chamber comprising an output port, said mold valve chamber defining a first axis;

an injection chamber in communication with said mold valve chamber, said injection chamber defining a second axis transverse to said first axis;

an injection piston movable within said injection chamber, an end segment of said injection piston movable to define a portion of a mold valve chamber inner perimeter; and

an air injection system in communication with said mold valve chamber.

2. The mold valve assembly as recited in claim 1, wherein said air injection system comprises an air source in communication with an air inlet through said mold valve chamber.

3. The mold valve assembly as recited in claim 1, further comprising a mold valve piston movable within said mold valve chamber.

4. The mold valve assembly as recited in claim 3, wherein said mold valve piston is selectively movable to block an air inlet through said mold valve chamber.

5. The mold valve assembly as recited in claim 4, wherein said mold valve piston scrapes said end segment as said mold valve piston moves toward said output port.

6. A molding system comprising:

a mold assembly which defines a mold cavity;

a mold valve assembly selectively mountable to said mold assembly; and

an air injection system in communication with said mold valve assembly to selectively inject air into said mold cavity.

7. The molding system as recited in claim 6, further comprising a mix head assembly in communication with said mold valve assembly.

8. The molding system as recited in claim 7, further comprising a feed assembly in communication with said mix head assembly.

9. The molding system as recited in claim 6, wherein said mold valve assembly comprises:

a mold valve chamber comprising an output port, said mold valve chamber defining a first axis;

an injection chamber in communication with said mold valve chamber, said injection chamber defining a second axis transverse to said first axis; and

an injection piston movable within said injection chamber, an end segment of said injection piston movable to define a portion of a mold valve chamber inner perimeter.

10. The molding system as recited in claim 9, wherein said air injection system communicates with said mold valve chamber.

11. A method for injecting matrix into a mold assembly through a mold valve assembly comprising an injection chamber and mold valve chamber, the method comprising the steps of:

(a) injecting a mixture material into the mold assembly through the injection chamber and the mold valve chamber;

(b) driving the mixture material into the mold valve chamber with a first piston;

(c) driving the mixture material from the mold valve chamber into the mold assembly with a second piston;

(d) curing the mixture material to form a cured article within the mold assembly;

(e) retracting the second position to an ejection position; and

(f) injecting air through the mold valve chamber into the mold assembly between the cured article and the mold assembly.

12. A method as recited in claim 11, further comprising the step of:

orienting an axis defined by the first piston transverse to a second axis defined by the second piston.

13. A method as recited in claim 11, further comprising the step of:

locating the second piston at an injection position prior to said step (a).

14. A method as recited in claim 13, wherein said step (e) comprises:

retracting the second piston past the injection position.